

CLAIMS:

What is claimed is:

1. A system for communications, comprising:
 - a housing having air flow perforations over more than half of at least one surface;
 - a printed circuit board including at least one component;
 - a thermal plate coupled between the at least one surface of the housing and the printed circuit board, the thermal plate being in thermal contact with the at least one component.
2. The system according to claim 1, further comprising:
 - at least one thermally conductive and complaint pad coupled between the thermal plate and the at least one component.
3. The system according to claim 2, wherein the thermal plate includes at least one raised portion, each raised portion being raised to facilitate thermal contact between each of the at least one raised portion and a corresponding one of the at least one component.
4. The system according to claim 3, wherein the thermal plate is aluminum and is manufactured by at least one of stamping and die casting.
5. The system according to claim 1,

wherein the housing comprises mating halves, each mating half including a dimpled mating surface and a rigid mating surface, each dimpled mating surface engaging the opposing rigid mating surface,

wherein the dimpled mating surface comprises at least one chamfer and at least one dimpled member for engaging the rigid surface.

6. The system according to claim 1, wherein the printed circuit board includes at least one optical component and further comprising:

a heat sink in thermal contact with the optical component and the housing, the heat sink conducting heat from the optical component to the housing.

7. The system according to claim 6, wherein the optical component includes a metal ferrule, further comprising:

an optical transceiver having a grounded metal ferrule electrically coupled to the optical component; and

a metal shroud coupled to the housing for surrounding the optical connector.

8. The system according to claim 7, wherein the metal shroud comprises dimples for electrically coupling the connector to the housing.

9. A method of manufacturing a communications system comprising:

positioning high power components on one side of a printed circuit board;

providing a thermal plate thermally coupled to the high power components;

providing a housing having perforations covering a substantial portion of its surfaces to permit exchange of heat through the perforations to the surrounding environment.

10. The method according to claim 9, further comprising:

providing a temperature sensitive component on the opposite side of the printed circuit board from the thermal plate; and

thermally coupling the temperature sensitive component to the housing.

11. The method according to claim 10, wherein the temperature sensitive component is an optical component.

12. The method according to claim 11, wherein the optical component is coupled to an optical transceiver on the printed circuit board and wherein the optical transceiver is grounded.

13. The method according to claim 12, wherein the thermal plate is thermally coupled to each high power component through a thermally conductive and compliant pad.

14. The method according to claim 13,

wherein the housing includes mating halves, each mating half including a dimpled mating surface and a rigid mating surface, each dimpled mating surface engaging the opposing rigid mating surface,

wherein the dimpled mating surface comprises at least one chamfer and at least one dimple member for engaging the rigid surface.

15. The method according to claim 11, wherein a heat sink thermally coupled to the housing and the component causes conductive heat transfer between the temperature sensitive component and the housing.

16. The method according to claim 15, further comprising
positioning a thermally conductive and compliant pad between the heat sink and the temperature sensitive component.